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A NEW TRIACANTHID FISH AND OTHER SPECIES FROM DEEP WATER OFF VIRGINIA

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The fleet of Gloucester otter-trawlers which operate out of Norfolk, Va., and adjacent ports in the winter months, fishing in moderately deep water near the edge of the continental shelf, continue to turn up rare and interesting fishes.²

Macrorhamphosus scolopax (Linnaeus) and *Antigonia capros* Lowe are not rare in these waters. A few were taken in 1933 and more in 1936. The junior author has seen 4 of the former from 101 to 113 mm. standard length, and 9 of the latter from 58 to 118 mm. standard length taken between January and March, 1936, fishing in from 18 to 50 fathoms between Cape Hatteras and Cape Henry. Numerous specimens of *Peristedion miniatum* Goode, down to 74 mm. standard length (including rostral spines), were taken in 1936 fishing off Hatteras in from 10 to 18 fathoms, but this is very close to the edge of the continental shelf, and the trawls may have accidentally shifted out into deeper water. Seven additional specimens of *Anthias nicholsi* Firth, measuring from 112 to 160 mm. standard length, were also taken in 1936, in around 40 to 50 fathoms easterly of Cape Henry.

Pontinus rathbuni Goode and Bean has already been mentioned as a red deep-water scorpion fish taken by these trawlers. In the spring of 1933 two specimens of *Helicolenus dactylopterus* (De la Roche) turned up in 50 to 90 fathoms, east-southeast of Chesapeake lightship; and in February and March, 1936, in 50 to 60 fathoms easterly of Cape Henry, several specimens of both these species and a single fine specimen of *Scorpaena colesi* Nichols were obtained. This last, apparently the second specimen to be recorded, measures 200 mm. in standard length. It is whitish in preservative, with irregular dark blotches and specks on the sides, and a few specks on the fins; pectoral, ventral, anal and caudal with narrow blackish edging at their tips. Superficially all three forms are much alike in color and appearance.

¹ U. S. Bureau of Fisheries.

² See Pearson, 1932, U. S. Bur. Fish., Invest. Rept., No. 10; also Firth, 1931, Copeia (4), p. 162; 1933, Copeia (4), pp. 158-160; 1934, Copeia (1), p. 45; 1932, Fishing Gazette, XLIX (12), pp. 6-7.

The following are finds of greater importance:

***Polymixia nobilis* Lowe**

This is another interesting species recently added to the fauna known from the edge of the continental shelf off Virginia. We have two specimens 100 mm. each in standard length, from 50 to 60 fathoms southeast by south of Cape Henry, Va., taken by trawlers in March, 1936.

Several species of this genus have been named in various parts of the world, but the fish seems everywhere to be rare and material for comparison seldom assembled. The American Museum collections contain only one additional specimen labeled *Polymixia japonica*, but without further data. After studying this scanty material and the literature, we agree with Günther, 1887, "Challenger" Rept., Zool., XXII, p. 34, that but a single widely distributed variable species is involved. However, specimens obtained in no two collections seem to be exactly alike, and we think it will be most helpful to identify these from Virginia by giving them a subspecific name. It should be noted that they agree well with one another and disagree markedly with the description of *Polymixia lowei* Günther from Cuba, the form previously described which is nearest them geographically.

***Polymixia nobilis virginica*, new subspecies**

DESCRIPTION OF TYPE.—No. 13569, American Museum of Natural History, from 50 to 60 fathoms southeast by south of Cape Henry, Va., March, 1936, taken by trawlers.

Length to base of caudal, 100 mm. Depth in this length, 2.8; head, 3. Eye in head, 3; maxillary, 1.7; interorbital, 4; barbels, 1.2; width of body, 3; depth of peduncle, 3.3, its length, 2.4; longest dorsal spine (the last), 2.8; longest dorsal ray, 1.7; longest anal spine (the last), 3.3 (rays broken); caudal lobe, 1.2 1/2; pectoral, 1.4; ventral, 2.2. Snout in eye, 1.6.

Dorsal rays, V, 30; anal, IV, 16. Scales about 55.

Few fin rays, combined with deep, compressed body; snout roundish in profile, projecting but little beyond the tip of the lower jaw; maxillary to slightly beyond eye; long pectoral, and rather low vertical fins seem to characterize this subspecies. The scales are rough ctenoid with serrate edges, apparently characteristic of the genus though they are not so described for it.

Our second specimen has depth, 2.7 1/2; head, 3; eye, 3; dorsal, V, 26; anal, IV, 15; scales about 55.

***Triacanthodes zebra*, new species**

DESCRIPTION OF TYPE.—No. 13568, American Museum of Natural History, from 50 to 60 fathoms of water, southeast to south-southeast of Cape Henry, Virginia, in March, 1936; taken by trawlers.

Length to base of caudal, 73 mm. Depth in this length, 1.6; head, 2.6. Eye in

head, 2.7; snout, 2.3; interorbital, 3.5; greatest width of body, 2.3; depth of peduncle, 3.2; its length, 3; pectoral, 2.3; ventral spine, 1.6; longest dorsal spine (tip broken), 4.2; longest dorsal ray, 2.4; anal ray, 2.5; caudal, 1.6. Width of mouth in eye, 2.3; width of gill slit, 2.3.

Dorsal rays, VI-16; anal, 13; caudal, 12; pectoral, 13; ventral, I, 1. Scales about 55 in a median line. Teeth conical; a main row of about 10 in the upper and 12 in the lower jaw, and back of this row about 2 teeth in each jaw. They are moderately large in front and small at the sides of the jaws.

Body compressed, rhombic; snout conical, meeting the convex, rounded interorbital in a concave angle. The back slants up steeply to the origin of the first dorsal spine, thence slightly downward to the origin of the soft dorsal, and more abruptly

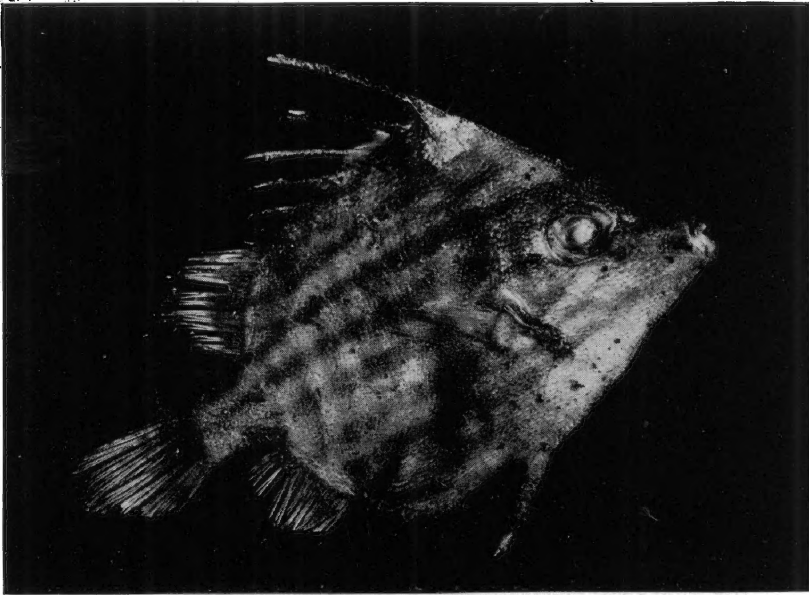


Fig. 1. *Triacanthodes zebra*, photograph of type.

to the peduncle. The lower profile slants downward to the ventral spine, which slant is continued farther back when the slightly movable pubic bone (which is almost horizontal when elevated) is depressed. Shortly before the vent, which is placed just in front of the origin of the anal, the outline rounds up into a steep slant to the peduncle. Mouth small, terminal, the upper jaw protractile.

The origin of the first dorsal spine (the longest) is immediately over or very slightly behind the gill slit; and the spines are connected by membrane only at their bases and decrease in length so that the last is little more than one-third the diameter of the eye. The pectoral has a free fleshy base which slants downward and backward. The ventrals consist each of a strong slightly curved spine which locks when set, and a short, unbranched, threadlike ray. Caudal rounded.

Scales fused with the leathery skin, everywhere rough and spinulose, with spinules particularly well developed on the interorbital, also present on the dorsal and ventral spines, and there are a few small spinules on the bases of dorsal, anal and caudal rays. No evident lateral line.

Color in preservative grayish, with about 7 lengthwise dark stripes on each side, narrower than the interspaces. One of these runs from the eye to the base of the caudal, the one above it from over the eye to the dorsal axil. This specimen was found on the wharf at Norfolk, Va., where the fishing fleet had been landing its catch, in a somewhat dried condition, and was then distinctly greenish in color.

Apparently but a single specimen of this family has previously been recorded from American waters, namely *Hollardia hollardi* Poey from Cuba. Ours is obviously a different fish. Not only has it the dentition of *Triacanthodes*, but dissimilar body outlines, position of dorsal origin, and color pattern from those shown in Poey's figure of *Hollardia*, and much higher dorsal spines. It resembles *Triacanthodes ethiops* Alcock from the Bay of Bengal as figured, 1894, Jour. Asiat. Soc. Bengal, LXIII, Pl. VII, fig. 6, but has shorter ventral spines, etc.

***Chaunax nuttingii* Garman**

Two small specimens of *Chaunax*, 70 and 80 mm. standard length, from 55 to 60 fathoms southeast by south of Chesapeake Lightship, taken in March, 1936, by Capt. Frank Favaloro of the boat "Grace F.," are provisionally referred to this species. We have compared them with specimens of *C. pictus* Lowe of different sizes and find certain differences which are outside the range of probable individual variation.

The "bait" is quite unlike that of any *C. pictus* to hand. It is subelliptical and about $\frac{3}{4}$ as long as the eye, as the niche is in *C. nuttingii*. It is broad, fleshy, and leaflike on a broad fleshy stem, when depressed completely filling the pit or niche behind it, its membranous edges lapsing over the edge of same. It is black in front or above, white behind or below, and the pit is black. The skin of the fish is also more finely granular than in *pictus*, there being 20 to 25 granulations versus 10 or 15 in a line crossing back of the pit between the rows of pores on top of the head.

The larger specimen, with belly loose and inflated, has depth in length to base of caudal, 2.4; head, 1.7; width of body, 2.8; eye in head, 7; snout, 6; interorbital, 4.5; maxillary, 3.3. The smaller specimen, with body much depressed, has depth, 3; head, 1.6; width of body, 2.8; eye, 7; snout, 5; interorbital, 4.5; maxillary, 3.2. There are 12 rays in the dorsal, 7 in the anal (imperfect in the smaller

specimen), 8 in the caudal, 13 to 14 in the pectoral; and 4 in the ventral.

Unfortunately the type of *C. nuttingii* cannot be located and is not available for comparison. Our specimens look much like the figure of that species except for the important matter of the bait, in *nuttingii* bilobed on a slender stalk, and described as shorter than the niche. There is the possibility that the *C. nuttingii* bait was imperfect or abnormal, or that this character is unreasonably variable. On the other hand there may be several instead of one or two species of this genus.

